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ANALYSIS AND NOTES ON:
PSYCHOLOGY OF INTELLIGENCE ANALYSIS,
BY
RICHARDS J. HEUER, JR.
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THE INTELLIGENCE CYCLE
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STRUCTURE OF MISSIONS AND MILITARY CONCEPTS
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CHAPTER I.

The components of consciousness

Sections I. II. III.

SECTION I.

Analysis and notes on: “Psychology of Intelligence Analysis” by the late Richards J. Heuer, Jr., who was a C.I.A. intelligence analyst.

1) Within intelligence analysis, there are many problems and hindrances that put analysts in struggles which can, if dealt with inefficiently, weaken an analyst's capacity to overcome simpler problems. The US intelligence cycle is an example of such an inefficiency because, as it becomes conspicuous from the book hereby analysed, they do commit three errors: (1) to abide inefficiencies by choosing a middle point between the errors they commit and the actual right solutions because their expectations and estimations got personally involved. (2) Providing subjective solutions to general problems, and (3) Providing general, but personal, solutions to particular problems; we can deduce, from the previous list, that all the USIC community do is to provide excessive arguments to a single problem so that their beliefs, because of the wideness of such arguments, remain unchanged. If an argument proves to be false, they widen and twist the nature of the problem in such a way that such an argument has some validity, and when given some validity they accept it as the truth. By no reason an intelligence community shall make its opinions prevail against the raw nature of experience. Whether we have a choice or not, we all live in a material world so it does not matter how fancy and elaborated an opinion or solution is, it will certainly be malfunctioning and bootless if it does not meet a material, real application. It might be wondered why, thus, I take up Mr. Heuer's book as a basis to describe something completely different: it is because Mr. Heuer's book may sometimes make a neutral reader come up with a list on what neither himself nor an intelligence community should ever do, and I then describe such a list for teaching and instructional purposes. Throughout this document, several instances of my own opinion can be found and I encourage the reader not to accept such opinions as the truth unless you have considered thoroughly inside your mind. You are free of coming up with the same or a different reasoning independently.

2) The previous advice has as its outline the existence of information overflow. When data overflow is present within a certain correlated chain of reasoning and requirements, the 'intelligence' put rather broadly, the results obtainable therefrom are prone to be shaped, only at a minimal degree, *by* and *as* a bias. These biases are not logical fallacies alone but also, and to a higher degree, limitations in the capabilities of an analyst to process such massive information altogether. When a community is used to collecting too much data they ignore the possibility that, sometimes, there may not be that much to collect, leaving a free way for such biases to pass through. A considerable amount of effort is necessary to ensure that such a reasoning is properly workable and reliable; when massive information is forced to produce a single result, it becomes hard to distinguish the reliable data from the dubious data since all information is taken up and judged equally reliable, and, therefore, either nature of data remains unduly analysed leading, thus, to the so-called intelligence failures.

3) It can be stated that, whereas the US intelligence cycle has a deductive (push) underlying structure, the UK intelligence cycle has an inductive (pull) underlying structure. According to a deductive process, we take an entire bunch of factors and we push them to their logical implication; taking up with ease all data that have just entered our mind makes us assume that all data is equally true and reliable, which is an error. A deductive process must, therefore, be carried out if and only if all data is equally true, in other words: if and only if the reliability of each individual factor is considered and ensured properly. Punctuality in reasoning is essential to provide useful and reliable information. This is because we do not care about self-awareness to be present when reasoning. We usually think more on the results we have come up with, their acceptance and consequences, but very little on the way by which we reached them. In other words, we lack self-consciousness for analysis issues.

4) Whereas the result of thinking is obtained consciously, the process of thinking is not worked out in consciousness, however we know that such a process has occurred at some point since the results of such process are revealed to us consciously (we may recall the conclusion drawn by the young William James Sidis in his text

called Unconscious Intelligence[1], which tells us: “subconscious processes are conscious”). We should not, then, think of “understanding the functioning of mind” as a repetitive process or as the collection of massive amounts of theoretical information, but rather as a process in which we understand the physiological functioning of the brain and its subsequent reactions, and how such functioning makes us think somehow about a problem. To understand such a physiological process properly we should constantly submit the experienced reactions and the obtained results under examination. We should judge them inside our minds coldly and rigorously just as we do with someone else's results.

5) Mental models are being created ceaselessly by humans as an attempt to diminish the natural complexity of the world’s manifestations, making them easily processable for the physiological functions. However, whenever these mental models are pushed further from their range, the limitations and hindrances hidden therein start then to become evident; this, for better, should make us seek for deeper methods of analysis, so that we reach a further depth of understanding. Such “deeper models” are understood to be either the works of those persons whose cerebral capacity enabled them to reproduce and pinpoint the truth skillfully, or those man-made resources for general use of scientific, philosophical and historical knowledge which represent an intellectual aid for those trying to push their minds beyond. Usually such lofty resources are brought to us by lofty men, moreover they are of no tasteless, colourless, or rigid utility to our purposes, neither of a strict, narrowed-mind nature; they serve to show us the right path, as precise as a single grain of sand, but as free as the wind that blows it away. Intelligence is shapeless and knows no rights or wrongs, better or worse, highs or lows.

6) This process of sharpening the mind by pushing it each time further develops, eventually, the highest mental model ever reachable: the absolute absence of mental models. It might be read oddly, yet not so much as to deduce that if there are no mental models then there are no limitations, and if there are no limitations then analytical processes are thus adaptable for shapeless methods, which can meet an increasingly higher degree of depth.

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[1] Symptomatology, Psychognosis and Diagnosis of Psychopathic Diseases, by Boris Sidis, Ph.D., M.D. Boston: Badger, app. IV, pp. 432-439, 1914.

7) One's own version of reality is, to a large extent, shaped by the peripheral nervous system along with indistinguishable processes within the brain of a chemical nature, being therefore superficial in contrast to consciousness. This describes, in summary, a physiological process and we may thus figure it as an unconscious process. Such unconscious processes are of a quicker mental generation than conscious processes, for the information is "absorbed" directly by the brain and related parts. Regardless of this, unconscious processes, as a general rule, run slower than conscious processes, which gives the brain little time to ponder about the received information, hence a thorough review is difficult, whereby we just accept the results as "top", as if an actual conscious chain were constructed underneath mental layers. Seldomly, unconscious processes run faster than conscious processes, and then the result is revealed internally to us as a quite obvious "top" layer, but other people could not derive the same result consciously because of their 'slow' unconsciousness. Its ultimate cause is the constant, tireless, and energetic practice of analytical skills, in which all sensory information is accurately understood automatically with almost no analysis in between. This occasion is commonly referred to as "intuition" or "clairvoyance" which means that a perfectly conscious chain of inferences is thoroughly constructed without "stepping" a single step or with almost no effort at all: this comprises the construction of logical chains, as to the content therein it would look like any other thorough and well-grounded chain patiently elaborated. Such an "intuitive" person then is somehow driven into explaining the "underlying" layers so that the common people can reach and understand the resulting "top" layer. Usually, for that intuitive person it results faster to understand the ultimate nature of a problem than to explain it. People that tend to guide themselves by other people's reasoning are faster in explaining than in understanding.

8) Physiological processes always take up sensory information entering to the brain which is accordingly re-shaped on the basis of information already stored, that is, our cerebral configuration resulting from the time we have hitherto lived. In short: the generation of mental models.

9) If we make up our minds on behalf of mental models, we would find a fine paradigm in “watching the world through other's lens”; under such a mental model, no limitations are possible either, since we constantly switch from perception to perception in order to build up a wider perspective on how the “big chain” would look like. Actually, since we are getting rid of personal models, based on our past experience and similar, we could possibly meet no limitations: accordingly, we may consider the “watching the world through other's lens” mental model as a synonym of allowing no mental models at all. It might seem unnecessary to remark that this allowance is only temporary in terms of internal thinking consequences, and punctual for each problem.

10) Before doing analysis, we are likely to exchange results with someone else's chain and perform psychoanalysis in reciprocity in such a way that it increases our awareness of how our reasoning modifies the interaction with other people. A paired conclusion, which happens more frequently than perceived, therefore can be set forth: (1) Analysts must understand their own thinking before they can understand other's, and (2) Analysts must understand other's thinking first before they can understand their own. We should, thus, aim the training inwards our own thought process. Most of the training time should be devoted to that end. Instead of emphasizing if the conclusions we have come up with happen to be right, we should emphasize thoroughness while doing reasoning, no matter if they somewhat happen to be wrong. Not only self-awareness is required, presence of will is essential to achieve such a skill too. This presence of will can be described as someone who still wants to understand, in spite of his mistakes. A practice that puts analysts on safe ground from such mistakes is simply to approach a problem with an empty mind.

11) A problem cannot be solved by collecting ridiculous amounts of information on the subject; this, as already mentioned several times, creates an overflow of data impossible for the analysts to deal with. In contrast, an effective scheme available for readily implementation is that of sorting the useful data apart from which is not.

SECTION II.

Perception: Why Can’t We See What is there to be Seen?

12) According to Mr. Heuer, “perception” is not a passive process and analysts should not record reality but rather construct it. Recording reality, as Mr. Heuer states, misleads us by inducing comfort and biases on our thought processes. Nevertheless, the definition of the words “record” or “construct” is misused by Mr. Heuer because if we accept such a statement as readily as it is advanced, it would lead us to ignore the constant bond ongoing in both definitions: by rejecting one, we would be ignoring and neglecting the expertise and practical experience proper from all knowledge, and, by accepting the other, we would be “walking while stepping our feet onto the air” which means that every step within our reasoning chains will float high in fancy and speculation: both things very far off from the truth. Mental models that are perception-based are short-range and doomed to failure, the above statement is a good example of this. We may recall Sherlock Holmes’ words addressed to Watson: “I have already explained to you that what is out of the common is usually a guide rather than a hindrance”: such a recognition of something out of the common requires, to a great extent, a rather panoramic perspective than the one obtainable by imposing our own perception. In order to give a sheer illustration on this matter we may say that, since perception is based on each one’s personal summation of reality, a rarity would be, therefore, hardly recognizable if its inclusion is not framed into that particular summation. Under such a model, a rarity, then, becomes in some sort of fortuitous, worthless event. By discarding such deficient methods of reasoning, the proper analyst starts to see everything with an open and empty mind, which in return, enables him eventually to see the truth. As a result, personal perception is a train of biased assumptions being reaffirmed each time an opportunity arises: making of perspective a train of rarities which are there to be seen every time an opportunity arises.

13) Rarities have been established as a guide proper from perspective, if is that so: does the commonplace point to perception or otherwise to perspective? In answering this question, it can

be said that the commonplace waggles from perception to perspective simultaneously; while it does compose most of the perception content, at the moment of dealing with perspective it signifies the other half of the guide. The second sentence leads us to think naturally that the rarities could not remain recognizable if it is unknown what the commonplace is. Accordingly, to build up a perspective, two halves are needed, namely: the rarities-half and the commonplace-half.

14) The factors that lead to inaccuracy are: (1) Highly ambiguous situations, and; (2) Increasing amounts of information being analysed under pressure. Being the *fons et origo* already understood, we may bear in mind the following factors in order to identify such a mistake when being committed and duly prevent it:

1. We tend to perceive what we expect to perceive.
2. It takes more unambiguous information to recognize an unexpected phenomenon than an expected one.
3. Mind-sets tend to be quick to form but resistant to change.
4. New information is assimilated to existing images.
5. Initial exposure to blurred stimuli interferes with accurate perception even after clearer information becomes available.
6. The longer the initial blur is, the clearer the picture has to be before analysts recognize it.
7. The amount of information necessary to invalidate an image is greater than the necessary to validate it.

15) These situations help the analyst to tell whence the deceit comes and avert it. If these errors lead to bewilderment, then we are enabled to derive the following principles from them, which lead to clarity:

1. Perceive what is there to be perceived.
2. Accept ambiguous information in the analysis by recognizing its double-edged nature, discarding its perceived nature from every chain that includes it.
3. Do not form permanent mind-sets but rather changeable ones in the ground of new information.

4. Assimilate new information to new ‘images’. Piece together the produced ‘images’ if necessary.
5. Do not attempt to define the blurred version of the image, use new information instead to bring it slowly out to plainness.
6. Allow information from a neutral standpoint. Do not attempt to validate or invalidate the image too early.
7. Facts may be interpreted fallaciously when evidence is ignored.
8. Evidence will highlight the way to see the facts unmistakably (a path which is unique for each conjunction of facts)

SECTION III.

Memory: How Do We Remember What We Know?

16) The accuracy of the analysis performed before a certain problem depends, to a great extent, in how well analysts shelve the data into their own minds. To achieve a flawless analysis the memory must be able to properly shelve not only the obtained data but also all the obtainable data concerned. However, long-term memory may backfire sometimes in remembering accurately large amounts of data, thus a highly reliable strategy to overcome this drawback is simply to write down all bee's knees details whilst the main skeleton is shelved within the memory.

17) The memory is not ascribed to a single function, and no complex concepts are needed to understand its functioning. In fact, when excessively complex concepts are drawn out from another concept that is already difficult enough, then these concepts are created only to be misunderstood and assimilated partially. Besides this, it is easy to see that we are talking about a human memory and not about a memory derived from computers: for it is easier for the second ones to process large amounts of data abstractly with no error, but it is absurd to compare them. More importantly it is useless to incur into such comparison: should human beings attempt to simulate such an artificial quality, a good deal of cerebral capacity and time would be lost forever. Replacing the analytical capacity for the "artificial memory" capacity leads us to something completely out of sense and purpose. A mere empty compilation of facts, dates, events etc., would be the only thing that remains inside our brains. Of course, anyone can boast of having an "encyclopedic memory" but, instead, his analytical capacity will be as useless as that of an animal. The brain has evolved to understand and discover, not to memorise: such an “encyclopedic memory” can perfectly be substituted by files, historical records, archives, encyclopaedias, books, notebooks, etc. Therefore, our concept of memory must be as simple as possible. Again, Holmes’ words succor us in approaching this concept: “I say now, as I said then, that a man should keep his little brain attic stocked with all the furniture that he is likely to use, and the rest he can put away

in the lumber room of his library, where he can get it if he wants it…”

18) Under this “simpler concept” the memory is composed of three functions: (1) Sensory Information Storage (SIS, or Sensory Input, SI): An individual receives information perceived by the sensory receptors, information which is carried by sensory neurons to the central nervous system. These sensory receptors are located in specialised tissues of the ears, eyes, mouth, nose and skin. Without these sensory receptors, or sensory neurons, the human body would be reduced to a dead organism inside which nothing is perceived or understood. Sensory neurons may be categorised as one of two types: (a) peripheral: which are those neurons activated by external stimuli such as the sight of light, touch, sounds, scents or taste, and (b) Visceral: are the neurons activated by internal stimuli produced within our own body such as pain, blood pressure, hunger, etc. Affectations upon these neurons, such as disorders provoked by heavy strikes or traumas, affect consequently the access of an individual to either type of sensory information which hinders directly the capacity of such an individual to analyse accurately since he has less knowledge perceivable of the properties of the problem being analysed by him. SIS holds information for several tenths of a second. This short period of time allows a second statement, that is the fact that under SIS the retention of the stimuli is practically as long as it is the duration of the stimuli itself. However, the brain processes the stimuli for a longer time. (2) Short-term Memory (STM, or Interpreting and Discerning, I&D): Information goes through SIS to STM, being retained for seconds or minutes (depending on the complexity of the information). Whereas SIS retains the entire, raw information, STM retains only the interpretation thereof. The information transferred to STM is judged in terms of relevance and meaning; relevance should always be fixed to the maximum (in function of rarities), and the meaning must never be pushed carelessly. When someone forgets something that has been told to him just a few moments ago it is because that person has not assigned enough relevance to it. Particularly, a person who is asked to retain and repeat a series of x items, would normally be able to repeat only the last chunk of them; this only remains true when relevance is fixed to a common level. Short-term memory is also associated with the number of items that the mind

can keep at one time. Such a capacity is the mirroring of how often a person makes use of his memory. That is, a person who keeps on using his STM is likely to develop a larger capacity for such a function. Conversely, a person who makes a much lesser use of it is likely to have a rather poor capacity and, consequently, would be someone whose reasoning is defectuous and full of loose ends. (3) Long-term Memory (LTM, Organising and Retrieving, O&R): Information passed through the previous two functions gets filtered by chunks. Loss of detail is always a one-way function; once sensory information has passed over the second function this cannot be retrieved in its original form, the only that lasts is the perceived form therefrom. The memory selects which of the data is higher in importance, resulting in the SIS final image. The LTM should retain SIS and STM data altogether with no assumptions in between. There exist two types of LTM memories: (a) declarative: these recall information about facts and events stored within the brain. They are called so because they can be expressed and communicated by a declarative sentence. (b) Nondeclarative: these recall skills, motor (physical) movements, qualities, visual images and emotions. Each one of these is used as further parameters when reasoning upon a problem that recalls them accordingly.

19) The following are the other two features present in memory processes, and the way they relate to intelligence questions: (1) Organization of Information in LTM: The way in which the information flows across the synapse affects directly intelligence analysis; when information passes into LTM storage, neurons connect each other in countless multiple ways[2], then we say that these paths hold a relationship. Every time we “walk” through a certain path it strengthens and becomes clearer for the memory when requested to recall it. Hindrances show themselves when we “walk” the wrong paths, generally speaking, when problem-solving; as a logical implication, the right paths will weaken, and their "relationship" will fade such that the neurons involved the first time are now isolated pieces of information upon which either the STM or the LTM are incapable to recall. Even if somehow the memory finds its way to recall them, the reasoning won't recognise their application or value for the current problem and they will wrongfully be discarded as "useless data" by the

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[2] The author gives these patterns the name of ‘schema’, being its plural form the word ‘schemata’.

memory so that the wrong paths will strengthen and prevail before the right paths.

20) Mr. Heuer describes the memory as a “massive, multidimensional spider-web”, which illustrates the fact that every node within this “spider-web” is interconnected with other thousand nodes. Comparable, according to him, to the connection between neurons. The former comparison, wherein memory is considered a “massive, multidimensional spider-web” is worthy (more or less) in terms of vastness and availability of stimuli, but in terms of organizing and retrieving information it is rather chaotic. Therefore it implies several difficulties when we try to trace our thoughts back, making it harder to review the chosen path, thereby pushing forcefully wrong reasoning all the way along. Moreover, retrieving any information requested under such a scheme is burdensome: if we were to retrieve certain data, we are bound to walk through thousands of paths until we reach the desired node. We may simplify it by considering the memory as a library, split in two rooms, wherein the one room contains organised information already known and the other room is occupied with new, ad hoc information: each time a thoroughly processed new information contradicts old known information, the respective shelf is emptied out and occupied again with the new information. Under a “library scheme”, when certain data is requested, the memory extracts the “file” from the shelf and utilizes it; when the task is finished, the memory shelves the file again, getting ready to recall further information upon request. The “paths scheme” is said to be highly complex and “not well understood” according to Mr. Heuer himself. We can easily state that this paired-room scheme is simpler and admits thorough review when it comes up to assimilate or reject new information in further reasoning. Nevertheless, it is limited as to the extent of each one's memory capacity. As a conclusion from the “library scheme” we can say that, in order to remember with the same relevance all new data, it must be examined and processed thoroughly and heedfully.

21) (2) Getting Information into and out of O&R: It was thought that how well a person retained something depended on how many times they repeated it to themselves in STM. It was found, however, that neither repetitions or periods play a key role. Actually, repeating something over and over does not guarantee the content to be

fixed in LTM. According to the author: "The key factor in transferring information from STM to LTM is the development of associations between the new information and schemata already available in memory". To put the author's phrase rather simple, we can think of it as a new book entering the memory, desiring a shelf into the old section; the memory would reason: "is it similar to another book found in the old section?" If so, the processing level would be minimal and the entering book will be discarded before long. Otherwise, memory would recognize its relevance, process it and shelve it on the new section.

22) We have come up with the conclusion that anything is more complex under a "spider-web" scheme, in contrast anything can get simpler under a "library-type" memory scheme which requires, of course, a definitive presence of imagination. We can look at anything in a book-like manner: a series of items, people's attitudes and sentiments, world stimuli, and, of course, sensory information. Under the first scheme, for example, we would need to recall countless occasions wherein such information interacted with our sensory receptors and name them all just to meet a single requirement. If, for instance, we have to memorise a shopping list containing 10 items, then it can be perfectly visualized as a 10-page book wherein one item is written per page. Memory would "read" it and compare it within the old section and then would decide its relevance. If judged as relevant then the memory will store it into the new section, otherwise it will be forgotten as soon as this data is no longer needed. There are two important conclusions resulting from this: (1) relevance must be prioritized over amount, and (2) When solving a problem using both sections of this mental library, everything surrounding the problem can and must be considered as relevant until the "big chain" shows us what is not (we may always consider this remainder as a part of a new problem)

23) There are, according to the author, three ways in which information can be stored in memory: (1) By Rote: The information is repeated verbally for regular periods of time till memory reproduces it accurately without any aid. Regarding the previous example, we may repeat those ten words on a regular basis and keep going till the information is readily retrievable off the shelf. Learning something by rote implies the

repetition of a feature without necessarily understanding its meaning which shows its inefficiency for analysis matters, for the latter implies a total understanding of the problem and each feature surrounding it. (2) By Assimilation: When we search for a match between the outline of the entering information and other outlines already stored. It can only be used to learn information related to previous experiences. Regarding the example advanced, we may remember any past experience where these items came into play, whether a recipe, etc. (3) Mnemonic Devices: It is a technique for arranging the information in such a way that remembering it becomes easy, does not matter the person, nor the complexity of the information. The field of mnemonic techniques is rather vast, and is said to be the best method to memorise anything. Regarding the previous example, we may imagine ourselves reading that 10-page book, passing the pages over, detailing words' font and size, seeing and touching with our fingers each sheet, sensing the paper texture, the cover design, etc., or; we may imagine ourselves at the grocery store with the list in our hands, searching and picking up each item, putting them in our shopping bag, etc.

24) Memory intervenes at every step of the intelligence analysis, by providing continuous information based on specific requirements concerning a problem. Accuracy in analysis is based on how well the memory responds to these tasks, and in how well information is organised within the memory. As to organising information, it is easier to break all the entering information down into categories (sound, smell, communication, a speech's content, etc). Nevertheless, drawing categories must be a process thoroughly carried out, otherwise information would be wrongly assigned and the analysis resulting therefrom will get misled.

25) There are other distinctions among these categories that contribute to accomplish an effective analysis: (1) Being the first-shelved information on a given topic. (2) The amount of attention given to the information. (3) The reliability of the information and (4) The importance attributed to the information at the moment a request was formulated.

26) The mind should be conditioned and trained to adapt to every swift, temporary but constant

change inherent to a changeable world in a smooth and quick manner.

27) As a conclusion for this first chapter: the presence of a consciousness is ascertained by the existence of two consequent and correlated actions: to reason and to remember. Reasoning and remembering are the most characteristic features found in consciousness. To reason about something requires necessarily to remember it, and when trying to remember something we invariably go backwards in our reasoning. Unconscious mental processes lack these two essential features and consequently will be like a field full of *empty* holes.

CHAPTER II.

Doing Analysis: the main hindrances, concerns, strategies, and aspects.

Sections IV. V. VI. VII. VIII.

SECTION IV.

Strategies for Analytical Judgment: Transcending the Limits of Incomplete Information.

28) The note hereby focuses on three aspects found in logical reasoning: (1) Strengths and limitations of logical reasoning. (2) Strategies to generate hypotheses, and (3) Strategies for choosing among a set of hypotheses.

29) Aspect I: Strengths and Limitations of Logical Reasoning: Mr. Heuer quotes the definition given to the word "judgment" from Webster's dictionary[3]: "arriving a decision or conclusion on the basis of indications and probabilities when the facts are not clearly ascertained"; a definition which sounds good, but it does not differ essentially from the definition given to the word "reasoning". Not to mention the fact that Mr. Heuer really meant any utility of such an obsolete and old definition for present time intelligence concerns. Moreover, and put in the same terms it is given to us, it should read rather like "when the evidence is not…" for it is not possible for facts to be ascertained by themselves because, again, facts need evidence to be backed up, otherwise we would be incurring into mere speculations. Accordingly, there exists a close relationship between facts and evidence, namely: facts cannot be analysed without evidence, and; evidence without facts is meaningless. In fact, any reasoning is held together by these two essential principles.

30) Facts and evidence are both proper from nature and its infinitesimal manifestations; the only aspect that comes from abstract mental processes is: how both, facts and evidence, are related to one another? This very same question sets down a foundation ground and several hypotheses are raised therefrom. A hypothesis, under an intelligence context, is a logical reasoning where some of the evidence is, for some reason, either temporarily or permanently unretrievable which leads to conjectures, which are logical speculations of a high or ambiguous likelihood. Usually, when these conjectures acquire an ambiguous nature they can be replaced by the notion of an inverse to the problem. Such an inverse is reached by realising that all

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[3] Webster's New International Dictionary, unabridged, 1954.

evidence obtained is accurate and reliable and yet they point to an impossible conclusion or to an even more ambiguous situation. In such cases, the evidence must be considered as double-edged, being the sharpless edge the one that represents such an impossibility and, conversely, the sharper edge the one that represents the must-be truth. When generating hypotheses, each one being currently developed takes up the same facts and evidence available, and each one implies a different arrangement of steps, or inferences, that, either synthetically or analytically, are equally probable; accordingly, each hypothesis leads to a different conclusion.

31) Questions, although were not described within the generation of hypotheses, do play an important role on how precisely the steps are constructed inside the chains of thought, from their answer we are able to tell which information is relevant and which is not. Questions are formulated in view of facts with sketchy pieces of evidence, and their fundamental purpose is: (1) Identifying what the missing evidence is like (or should be like). (2) Discerning which evidence is retrievable or ascertainable or which is not. (3) Identifying where the missing evidence can be found (or should be found), and (4) Identifying how the evidence would/do help in explaining the gaps present in well-grounded inferences.

32) There is another way to accomplish a flawless reasoning: the so-called lateral thinking. This reasoning method is not as well-known as others, yet, still as useful as those. It is produced when the use of imagination is brought up to logical processes in order to provide an equally logical and well-grounded output. It is called “lateral thinking” when the analyst cannot rely on evidence to conclude that something is there but, however, they can conclude that that something must be there just by applying their imagination on the underlying sequence of steps; accordingly, there can be suppressed chunks of steps scattered throughout a reasoning chain and a capable “lateral thinker” should be able to tell precisely what those steps were like and why they led to the remaining steps inside that chain. Although this reasoning method leads, to some extent, to more ambiguous situations, these, usually, can be narrowed down to just a few alternatives, regardless of how unusual or "weird" these alternatives appear to be. Invariably, common conclusions are drawn out

from commonplace perspectives, therefore to reach a "lateral conclusion" we must ask ourselves how "commonplace" our inference chains are and if "unusual" chains can be constructed without incurring in fallacies. Most of the time, such "lateral conclusions" somewhat follow the existence of an inverse. A mind free from any kind of biases is essential to perform lateral thinking flawlessly, and, in fact, any type of reasoning.

33) We can interpret Holmes’ words, first spoken in A Study in Scarlet, as follows: reasoning analytically is the process of discerning the causes that led to a given particular effect, and; reasoning synthetically is the process of inferring the effect that outcomes a number of causes thereafter. Moreover, all logical reasoning follows the same principles as those found in forensic sciences (since they follow the same purpose), namely:

1. First Principle: Any problem is unique in its features[4] and nature, there is no single problem whose characteristics match exactly with those of a second problem, unless both problems are the same.
2. Second Principle: Any problem is constantly progressing on time, all its features are constantly changing as well.
3. Third Principle: Any interaction between two features leaves traces, evidence, behind; there is no interaction of invisible traces.
4. Fourth Principle: Anything can be analysed.
5. Fifth Principle: A particular feature can only be compared with another feature of the same category or nature.
6. Sixth Principle: When facts lack evidence, it is always possible to explain these gaps with probability.
7. Seventh Principle: Facts and evidence do not lie, people do.

34) What is called logical reasoning is a process where facts and evidence are held up side-to-side and linked through explanations: these explanations set forth the causes and the effects, as thoroughly as possible, in the form of inferences. An illogical reasoning is produced when there is a scarcity from either side (facts

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[4] These features are, generally speaking, the following two/four: causes & effects, facts & evidence.

or evidence) and, yet, it is intended to draw an explanation out: usually, the explanations resulting therefrom tend to be mere speculations and, most of the time, they turn out to be false. Such a scarcity is just a derivation from a more general dual-problem based on extremes: (1) When it is somewhat known a fact but there is no evidence of it at all, or; when all the present evidence has not even a single fact to match with, and; (2) When a single fact overflows with positive or negative evidence. These two problems can be approached by asking the following questions: (1) What evidence should be out there to prove a certain fact? Is there a fact that, despite differing in nature or context, matches with the available evidence?, and (2) Which is the intrinsic, and which is the unnecessary evidence?

35) When there is no way to overcome this paired problem, or when there is no way to retrieve the lost evidence, then, all we can do is accept incurring into speculations. This is the most significant shortcoming as to the inherent nature of analysis because it somewhat represents a lack of understanding: an empty knowledge from which nothing can be told precisely or tested out. Human errors and limitations cannot possibly be regarded as shortcomings because, even if humans misunderstand all natural manifestations, they will remain true on their own. Is meaningless, therefore, drawing nonsensical or complex definitions when definitions themselves come from the human mind alone, which is defectuous by nature.

36) A *beau idéal* analysis may be achieved by cultivating no "defined", nor "theoretical" understanding but, rather, a precise, sheer understanding of a logical and an experiential nature. Although it is undeniable that definitions comprise the main body of all knowledge, these definitions, once again, are void and useless if there is no comprehension underlying them.

37) Aspect II: The author identifies, in a proper manner, only three strategies which, for simplicity purposes, are the ones to be exposed hereby. The remaining two[5] can be perfectly investigated separately as the reader pleases. Since these strategies were described widely and extensively, it was decided to untwine them to

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[5] Namely: "A "non-strategy" immersion in the data and letting the data speak for themselves", and "projecting one's own psychological needs onto the data at hand".

reach only the essential. Again, if you are looking for further explanations you can do some research on your own.

38) Situational Logic: Situational logic is already described in the first section, and it was described in the first aspect of the current note. There are only two more items on this matter: (1) To completely understand a problem we must comprehend both sides of the truth. Put very roughly: what is true and what is not; what happens to be right and what happens to be wrong, etc. Of course, this is only possible when we already have come up with a general chain of steps. (2) A single fact or conclusion must never be regarded as a whole truth on its own, also known as: pars pro tote.

39) This is an opinion-based commentary on my end and, consequently, should not be considered as relevant: author's principles disagree with their logical implications, put on author's own words: "Generation and analysis of hypotheses start with consideration of concrete elements of the current situation, rather than with broad generalizations that encompass many similar cases. The situation is regarded as one-of-a-kind, so that it must be understood in terms of its own unique logic, rather than as one example of a broad class of comparable events", which conforms the first statement, and: "The second weakness is that situational logic fails to exploit the theoretical knowledge derived from study of similar phenomena in other countries and other time periods"; put more simply: if we define every event within situational logic's framework as "one-of-a-kind", then analysts' inability whether to predict or generalise other country's phenomena should not be regarded as a "weakness" but rather as a perfectly logical outcome. Although it is not explicitly mentioned the intention of generalizing that knowledge, we can deduce this by how the word 'exploit' is employed. Something that may substitute such generalization is maintaining an archive of precedents wherein the features and outcomes found in other cases, either recent or old, of the same category (see the fifth forense principle) are consulted in order to establish hypotheses from a more stable ground.

40) Applying Theory: A theory of the causes and effects found in similar problems belonging to a certain category. It does tell us what the effects will be if certain causes arise, or,

inversely, derive the principal original causes if only the effects are available. Actually, drawing theories require large amounts of information and therefore imply more ambiguous situations. Drawing a theory, for the analysis conducted upon to be accurate, the quantity of features must be as large as t. enclose an ample processable amplitude of problems but small enough as to understand and analyse them as a whole. This leaves us with the acceptable statement that, in view of the implications found in deriving theories, it would be better to draw hypotheses of a more general skeleton than the given to common hypotheses that can suffer little modifications as they get analysed within a framework and a period of time. In fact, a theory is generated when a set of statistics, let us call them so, are analysed in consideration of those two parameters, being the second one prolonged for a quite long period of time, such as years, lustrums, or decades. Moreover, it is an error to ignore all obtainable features and yet derive "general rules" from the obtained ones only. And so it is to regard unobtained, yet obtainable, features as "exceptions to the rule" instead of recognising that, for example, these may have a sporadic frequency of occurrence and, even though, they still remain true when they happen, being valid thus to regard them as rarities. Not to mention the fact that comparing two theories is only applicable to the obtained features present on both, and their unobtained features must be treated as unique in both unless some connection is proven to exist.

41) Comparison with Historical Situation: When comparing two problems, we must not think that both are the same just because some of their features match. If some old problem that matches is found, then, it is not the duly procedure to extrapolate the old problem into the new problem: it must happen backwards whenever a comparison strategy is applicable. The ideal here is, as it results from the second phrase, to extrapolate the new problem's characteristics into the old problem, lest we commit previous errors. Comparison of problems is not actually meant, therefore, to compare individual problems but rather to compare events, since the first summation of features would result too short to draw anything clearly.

42) According to Mr. Heuer, the following are the most common hindrances when resorting to a comparison scheme: (1) Analysts tend to seize

upon the first old problem that comes to mind. (2) They conduct superficial research. (3) They do not pause their lines of thought to analyse the problem coldly, and (4) They do not consider the ways in which their lines of thought might be misleading.

43) The ultimate purpose of such historical comparison is said to be composed of a pair: (1) Suggest hypotheses, and (2) Highlight differences. It was also concluded that drawing conclusions is not a suitable option under such a strategy.

44) Aspect III: Strategies for Choosing Among a Set of Hypotheses: This point is exposed for completeness purposes only. When reasoning, the truth is the only one thing we ought to be looking for. Therefore, it is useless to choose this or that hypothesis as if we were choosing clothes. "Good enough" hypotheses are useless if they happen to be false, the same goes for "bad" hypotheses. Actually, when looking inside a certain problem, all hypotheses derived for the moment will result in worthlessness when the truth is found. Inversely, if the truth cannot humanly be found then it still results nonsensically to draw a bunch of hypotheses where we cannot confirm none of them.

45) Right next Mr. Heuer's words are quoted: (1) Satisficing: "Selecting the identified alternative that appears"good enough"rather than examining all alternatives to determine which is "best"". (2) Incrementalism: "Focusing on a narrow range of alternatives representing marginal charge, without considering the need for dramatic change from an existing position". (3) Consensus: "Opting for the alternative that will elicit the greatest agreement and support. Simply telling the boss what he or she wants to hear is one version of this". (4) Reasoning by analogy: "Choosing the alternative that appears most likely to avoid some previous error or to duplicate a previous success". (5) "Relying on a set of principles or maxims that distinguish a "good" from a "bad" alternative".

46) Throughout the set of strategies advanced by Mr. Heuer it's been present the intention and concept of 'predictions', sometimes mentioned and other times suggested subconsciously, and therefore I, for completeness reasons, find it necessary to explain its inherent content although a bit steeped with *my own* standpoint.

Its outline goes like follows: the process of predicting an event has its roots both in the field of probabilities, where the concept of 'uncertainty' plays a key role, and in the concept of 'human control' meaning the extend upto which humans have control of their own actions and the extend upto which they are capable of controlling the actions and decisions of others. Unlike statistics or complex sciences, military intelligence is meant to have an authentic and practical application far beyond the descriptive aspect of such sciences: any operative must be capable of acting upon intelligence products in order to accomplish a result that is entirely physical. Therefore, natural events that are predictable with the only purpose of providing an account of statistics have little application and value within military intelligence since the 'human control' factor over any of these mean nothing when it comes to accomplishing a result or performing an operation. If the event itself will happen anyway no matter human interference it means that the 'human control' has *zero* influence. Hence such an event must be considered not as a 'prediction' but rather as fact, one that can be exploited advantageously under the concept of 'tactical maneuver'.

47) As we have seen, the 'human control' factor is essential in helping an intelligence community to decide where to direct their attention and efforts, and everything surrounding the word 'human' is likely to affect such a decision including, naturally, cerebral processes and reasoning. Accordingly, the necessity of predicting something that may potentially interfere with an operation is only produced when an accomplished reasoning chain or decision is pushed further towards the future. Usually, this necessity comes in terms of: (1) social and population consequences. (2) Risks concerning the welfare and 'health' of the service and operatives. (3) Investment losses. (4) Consequences in terms of both maneuvering situations: (a) maneuver warfare, and (b) tactical maneuver, with emphasis on the second one.

48) According to the previous two paragraphs we may draw a distinction between a 'scientifically predictable event' and a 'military predictable event'. Such a distinction has the following outline: (1) the path that an event might follow may be anticipated by looking at the rarities

found along. (2) The prediction of an event is useless if such cannot be either prevented or ensured to happen by the intelligence community or operatives. (3) The level of human control depends on the complexity of the event; the greater the complexity is, the higher risk it implies operational engagement.

SECTION V.

Do we really need more information?

49) Reasoning implies, as the chain of inferences is being constructed, the process of discerning if we need more information or not at certain steps. The affirmative answer for this process implies searching further for both evidence and facts: however, when there are no more facts to be found or confirmed we are bound to accept the negative answer. In such a situation, we may get a hint by asking ourselves the following two questions: (1) When the four fundamental questions were answered, the response in each one was, roughly speaking, a *no*? (2) Is there any other information that when pushed even further, suggests the existence of unknown information?

50) When searching for further information that possibly cannot be there, we tend to complicate the current chain of thought, all on the ground of such fallacies as: "if the chain is getting more complicated it is because we are reasoning more accurately", and similar. When we really cannot obtain more information it is simply because there is nothing left to find. What certainly proves to be more accurate is to push evidence, even the smallest piece, in depth to their own logical implications without having to require further or fewer information.

51) We may, again, quote Holmes' words in this respect: "How often have I said to you that when you have eliminated the impossible whatever remains, however improbable, must be the truth?"; these few words dispel the fog floating around this respect. When the possibility that we are lacking of information (or, inversely, overflowing from it) has already been considered, and yet the answer has been negative from all possible points of view, it means, as a result, that there is nothing left to be found or to be eliminated for the inference chain, regardless of the apparent simplicity or complexity of the resulting problem.

52) Despite this explanation being too short, it is not possible to draw a general method or procedure that could tell us exactly how to recognise that we are actually requiring further information. The only thing we can do is consider, as described in the para. 50, the

smallest evidence and analyse it deeply within its own realm. For instance, if we were going to analyse some problem that involves a door we would ask such questions like: In which material is it made? How do the hinges work? How can it be open or closed? How heavy is it? Is there another object required to open it like a key, chain, padlock or some kind of card? Does it have scars or scratches? Is there something that has been wiped off recently?, and so on; as we can notice, there are some questions that can be answered without having to require further data, and others that do require so.

SECTION VI.

Structuring analytical problems.

53) Seven, plus or minus two: this is the number of tasks that is believed the working memory, or STM, can process at one time.[6] However, we should not think of such a "magical number" as an absolute outright conclusion because, essentially, the working memory is capable of performing a task consciously and at the same time performing another task subconsciously. This might be ascertained by evidence if we ask anyone to tell if they have suddenly forgotten something they were thinking about just moments ago, and, in return, they remembered something else that certainly did not entered into such process; we owe this to the fact that the working memory solved in that instant a subconscious task replacing and "turning off", maybe due to the relevance assigned, the conscious task being processed theretofore. Thus, the main question herein is not about how many tasks working memory can take up as a whole but, rather, how we could make our own working memory to take each task up to a conscious level of thinking.

54) In response to this question, we can induce our memory to take more "conscious tasks" up by externalizing the problem; which means to simplify memory's work by relying on some physical aid. For example, taking bee's knees notes, writing the problem down, sketching evidence-facts relationship, listing unretrieved evidence, writing down all evidence categories found hitherto, and so on; in such a way that the memory can focus entirely on the inherent problem. This will help us in establishing variables, which are the present variety of features, and their relationship, assuming that it is possible to have more than one probable configuration to relate them.

55) The concept of variables, broadly speaking and according to Mr. Heuer's words, is the process of reckoning how many combinations there are in function of a number of factors. For example, if we work with five variables in mind the total number of combinations will be ten[7], thus the previous "magical number" is nothing

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[6] George A. Miller, "The Magical Number Seven, Plus or Minus Two: Some Limits on our Capacity for Processing Information". The Physiological Review, Vol. 63, No. 2 (March 1956).

[7] Polygonal combination. $C = v(v-1)/2$, where C denotes the number of combinations, and v the number of variables.

more than the number of variables with which the working memory can perform at one time in a shuffled combinatory. Nevertheless this assumption of the “shuffled combination” does not hold at all in any logical situation because we are, then, misunderstanding both facts and evidence’s nature (and the logic as a whole). Each problem has unique features, and each feature develops within its own category/nature. In other words, we cannot assign whichever evidence to any other fact intending to draw a valid inference from such a random combination. The only we would get in return is a combination that not only leads to deficiencies and falsehood but also to significant memory space misused. The scarcity of evidence (or facts) is the only possible case where such an assumption could acquire some value. And, to begin with, it does not describe anything that differs essentially from the conjectures or speculations already ongoing within logical thinking.

56) The following quote, which comes from a letter that Benjamin Franklin wrote in 1772 to Joseph Priestley, is attached for completeness purposes only:

1. “In the affair of so much importance to you, wherein you ask my advice, I cannot for want of sufficient premises, advise you what to determine, but if you please I will tell you how. When those difficult cases occur, they are difficult, chiefly because while we have them under consideration, all the reasons pro and co are not present to the mind at the same time, but sometimes one set present themselves, and at other times another, the first being out of sight. Hence the various purposes or inclinations that alternatively prevail, and the uncertainty that perplexes us.
2. To get over this, my way is to divide half a sheet of paper by a line into two columns; writing over the one Pro, and over the other Con. Then, during three or four days of consideration, I put down under the different heads short hints of the different motives, that at different times occur to me, for or against the measure.
3. When I have thus got them all together in one view, I endeavor to estimate their respective weights; and

where I find two, one on each side, that seem equal, I strike them both out. If I find a reason pro equal to some two reasons con, I strike out the three… and thus proceeding I find at length where the balance lies; if, after a day or two of further consideration nothing new that is of importance occurs on either side, I come to a determination accordingly.

4. And, though, the weight of reasons cannot be taken with the precision of algebraic quantities, yet when each is thus considered, separately and comparatively, and the whole lies before me, I think I can judge better, and am less liable to make a rash step, and in fact I have found great advantage from this kind of equation…”

SECTION VII.

What are cognitive biases?

57) Also known as logical fallacies, cognitives biases are clear examples of what personal perceptions look like. Most of the time, these perceptions are held under an illogical reasoning, or a reasoning that, just as shown in para. 55, involves erroneous matching of facts-evidence. Logical fallacies have nothing to do with those limitations found in logical reasoning because, as a general principle, they reveal human deficiencies and ineptitude in argumentation, regardless of the quantity of features collected. Their nature relies on the "necessity" of analysts to sketch the easier way out of a certain problem lest that further reasoning gainsay their perceptions or their efforts invested.

58) I do not agree with Mr. Heuer's statement, which tells us that "Awareness of the bias, by itself, does not produce a more accurate perception. Cognitive biases, therefore, are, exceedingly difficult to overcome", I personally can say that, since biases are included into the endlessness of reasoning chains, these cannot be overcome at all to begin with. How to prevent incurring into such biases when we are reasoning? This is the gist herein. Preventing them, therefore, is possible and, by recognising their general nature in distinctiveness, they do help us to think more accurately since they enable us to discard any configuration that depends, however slightly, on any of them. Besides, cognitive biases, as mentioned in para. 57, are merely the result of an analyst's ineptitude to analyse properly: they do not describe some "supernatural" or "mysterious" monster "impossible to defeat". For the very same purpose, an appendix is attached separately to the present document, which contains well-nigh all logical fallacies sorted alphabetically, so that they can be identified and prevented when reasoning.

59) Evidence source is a misleading approach to discern evidence reliability. Sources from where evidence can be found are indubitably boundless, then it follows that suchlike approaches do often involve a good deal of factors that may provoke gimcrack any succeeding reasoning. For example, the source from which evidence comes is listed as

one of these factors; as a paradigm, we are prone to trust on a physician's advice concerning health and welfare matters more than when the same advice, in skeleton and content, comes from an average person. Based on the physician’s expertise, we might state that such advice is indeed trustworthy, relying on it to build up any successive steps. At prima facie this looks unquestionable but, actually, such a type of statement is found amongst the list of logical fallacies: reliable sources do not ensure reliability in reasoning at all, whereby it is required that logical chains develop from scratch: if such source and the given information by them actually prevails as true inside each well-grounded chain then, and only then, we can consider it as a well-grounded feature as well. Otherwise, it shall be discarded as irrelevant or false along with every chain that takes it into account.

SECTION VIII.

Three Types of Perspective.

60) When reasoning properly on a certain problem, we do, whether consciously or subconsciously, incur into a tripartite perspective. Analyst, related, and onlooker: these are the components of such a perspective and their outlines are based on an internal, amid, and external point of view: (1) Analyst's (internal) Perspective: It represents the kernel of every problem and every reasoning will revolve around it. This is the way wherein we reason about some problem inside our own brain: what do we think about it? What do we smell, see, perceive? What do we reason about it? How do we reason about it? Upto what extent can we reason thoroughly on our own? In which steps do we need supplemental evidence?: going along with the fourth forensic principle, we analyse everything from our own perspective until it becomes necessary to switch it for another. (2) Related (amid) Perspective: Also called: concerned, opposite, or involved. It represents the standpoint held by the subject on whom we are reasoning about. Whether it is a person, an abstract problem, or a natural manifestation: everything produces and is surrounded by some form of innermost thought or feeling that invariably can be understood and appreciated. Switching outlook towards an opposite perspective generated by logic, requires us to ask ourselves: which is the underlying nature of their reasoning? How does their reasoning match with our own; how does it not? What are the flaws and well-grounded steps inside their reasoning? Are there any flaws in our reasoning that can be discerned by understanding the opposite's reasoning? Are there any valid inferences that can be identified by understanding the flaws contained in the opposite's reasoning? Put very simply, we can approach an opposite outlook just by taking an amid perspective as a new factor/feature to think about including it as a new implication for our own reasoning. Obviously, logical thoughts are the chosen ones to be evaluated. (3) Onlooker (external) Perspective: This kind of perspective is produced by someone who has not consciously developed a reasoning concerning the subject. Furthermore, consciousness is not a characteristic herein. Any third party that witnesses an interaction between other two parties is bound to generate a

perspective about such an interaction, at least in subconscious levels. Whereupon such a third party ponders whether to reason consciously about it or not. More simply: they decide whether that interaction they have just witnessed raises their interest or curiosity. If they find it dull or unworthy, repercussions are less likely to reverb on them. Otherwise, we are allowed to consider them as a related party. Switching outlooks is not something that occurs just once throughout the whole process. It takes place several times fitfully as steps are being constructed until the problem is solved.

CHAPTER III.

The Intelligence Cycle: Its structure and functioning

Section IX.

SECTION IX.

Functioning and Structure of the Intelligence Cycle.

61) Intelligence has four purposes, namely: (1) enable understanding: all intelligence should provide information about a subject’s intentions, capabilities, and motivations so that the present crisis can be understood and dealt with efficiently, enhancing the recipient's capability to make decisions.

62) (2) Intelligence should help to define and support an objective's accomplishment and also to define requirements, adversaries and enemies, and neutral actors and how these factors [might] get involved while executing a method.

63) (3) Produce Predictive Assessments: All intelligence products, as described in the para. 77, shall have a forward-looking application. They should point out the three types of risks, cold and hot opportunities[8], and predictive solutions to a crisis.

1. The three types of risks are: (1) Risk to Force: it refers to the potential inability of either an individual or a community to achieve the objectives set out or to sustain an operational state due to a lot of factors such as: (a) operational risk: the probability of failure in the accomplishment of an operation or during its execution. (b) inadequate planning. (c) strategic risk; the probability of being unable to achieve long-term objectives due to several factors. (d) force structure risk: the risk of not having a sine qua non state in terms of personnel, equipment, or training that a certain operation requires. There are four factors affecting this type of risk. (i) force planning: inadequate planning, dim or ambiguous objectives, insufficient resources, or unrealistic

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[8] To keep it simple: a ‘cold’ opportunity is when an operative plans how could he make such an opportunity arise in case needed, and a ‘hot’ opportunity is when the operative takes and ensures an unplanned advantage produced by either the heat of the moment or by accidental mistakes committed by the enemy.

deadlines. (ii) poor partner relationships, and ineffective support. (iii) geopolitical environment changes. (iv) technological advancement: the development of new technologies for communication by the enemy as a means for disinformation. — Ways to mitigate the Risk to Force: (1) establish clear, precise, simple objectives. (2) do effective and thorough cold planning and a quick and timely hot planning. (3) strengthen your partner relationships on the basis of training exercises and communication. (4) monitor and stay aware for constant news, modifications, reforms, law, etc.

2. Risk to Mission: it represents the previous risk present in the context of secret missions. Follow the previous four ways to mitigate the Risk to Force, plus one: (5) clean, secure, and coordinated communication and dissemination.

3. Risk to Reputation: it refers to potential negative publicity, public's perception, or humanly uncontrollable events. Their source can come from one of the following: (i) direct actions: which are actions, decisions, and products coming from the intelligence community. (ii) indirect actions: which are actions and decisions coming from agents, operatives, personnel, staff, etc. Such errors usually involve disinformation communicated among agents, misinterpretation and misuse of intelligence products, deficiencies in organisation, coordination, articulation, logistics. Errors committed because the agent incurred into hastiness, impatience, etc.

64) (4) Provide Indicators and Warnings: Intelligence products and activities detect and report time-sensitive information concerning

movements and developments that could constitute a threat for the current objectives.

65) Intelligence activities have, broadly speaking, six priorities: (1) Intelligence, Surveillance and Reconnaissance (ISR)[9]. (2) Capabilities. (3) Policies. (4) People. (5) Training, and (6) Events and the enterprise of cold/hot planning. Those priorities correlate with other four objectives: (1) the Identification, (2) Neutralisation, (3) Countering, and (4) Defeat of an enemy.

66) Intelligence follows three principles: (1) Resilience. (2) Adaptation: reduce negative unintended consequences, exploit positive unintended consequences, while focusing on achieving the objectives originally set out. (3) Flexibility: Redirect your efforts to meet changing priorities; there is more than one way to work.

67) The intelligence process, as it is authentically known, is a process consisting of six phases (some "variations" put more or fewer phases into it) that are employed cyclically. Such phases do not happen in linear sequence nor circularly, but rather interchangeably: for instance, the processing & analysis and the dissemination phases may sometimes be executed at the same time, and other times one phase can be suppressed from the sequence. These six phases are named and meant to be understood as follows:

68) [First Phase] Direction & Intelligence Requirements: This phase covers the intelligence requirements in relation to an objective. If priorities are needed in the format of a checklist, so be it; the point is to understand what an objective takes to reach accomplishment. All planned information to be collected must obey a clear purpose and all information must be disposed of so that any scarcity or excess is prevented. We should aim our understanding at the following questions: (1) Are there any gaps in the intelligence already collected? (2) Are there any groups or subjects of interest? (3) Are there any locations, generally speaking, of interest? (4) Are there any historical records or experiences, either of your own or from someone else, that do have an authentic application for the current crisis?

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[9] The ISR community works from a five-phase process similar to the intelligence cycle, namely: (1) task. (2) Collect. (3) Process. (4) Exploit, and (5) Dissemination.

69) [Second Phase] Collection: The collection phase follows along the prior established priorities and it looks toward filling them with satisfactory answers. Overt collection is effective but not as effective as secret collection is. Secret, or covert, collection can meet tailor-made requirements more accurately and quickly than overt collection. Secret collection is also referred to as "first-hand information" and it can provide not only extra reliability but also practical experience to the information you are collecting overtly. It is true that a vast range of sources is required to carry the collection phase properly out, but equally false it is, and it also happens to be the failure into which the US cycle incurs, to assume that conducting the collection process in a proper way involves an aimless and unclear yet massive approach. Overflowing information distracts and derails analysts from the established purpose debouching into a completely nonsensical accumulation of useless information. Therefore, when we are judging which sources to use ad hoc, the following factors, amongst others, should be borne in mind: (1) Capability: Can the source you choose complete and satisfy your requirements? (2) Suitability: There are occasions where different sources can satisfy your requirements, so make sure that your call is the most suitable. (3) Multiplicity & Balance: Whenever possible, and in relation to the previous factor, resort to multiple sources in order to prevent deception or inaccuracy. (4) Timeliness: Can the source you choose satisfy your requirements in the necessary timeframe?

70) More advanced techniques to gather information up are: (1) Covert Human Intelligence Sources (CHIS): Operatives who gather secret information in response to requirements. (2) Directed Surveillance: The information collected by following or observing a subject. It stands as another term for "shadowing". (3) Interception of Communications: Information collected by monitoring someone's emails or phone calls. (4) Communications Data: Technical information about emails, messages or phone calls. (5) Bulk Personal Data, Datasets: Archives containing information on a good deal of people which can be targeted in case they become a subject of interest. (6) Intrusive Surveillance: Intruding a subject's home, for example, in order to gather further information about them. (7) Equipment Interference: For instance, covertly assessing a subject's computer or other devices.

71) Research: The collection process does very frequently require the process of researching which is, broadly speaking, the process where unknown information is searched in order to explain or understand other information already known but that remains disjointed in appearance. Hereby is presented a more detailed explanation: In the first place, we must differentiate the following two aspects from the word “research”: (1) Doing, or conducting research, and (2) Being a researcher. The question at issue relies on the structure of the first aspect, being the second aspect the logical outcome of the first.

72) The main difference between the process of research and other processes involving the collection of information, such as reasoning, is that the latter are carried out in such a way that an obtained input data is to be pushed logically so that an output, or solution, can be reached whilst, inversely, a research process begins with output data somehow obtained but whose input data is missing. Looking thus for the links between both in order to understand and consider such 'joined' information in further analysis. The word “input” here acquires a more general meaning than the one given in other mental processes; in fact, we may replace this word so that it reads “known data” or “obtained data”. As a consequence therefrom, the word “input” comprises not only known primordial information, such as causes or facts, but also sequential information which are effects or evidence and the nature of the word “output” is to disclose their missing ‘unknown’ respective half. According to what has been said heretofore, a research is to look for information beyond the information readily obtainable or already at hand. Put rather straightforwardly, a research is to search for the “unknown data”, and to tell how this “unknown data” may help us in understanding the nature of the “known data”. The process of searching for the “unknown” is an inherent part of every mental process where a result must be reached. However it is bound to them in a changeable nature.

73) Research is enabled to start only as long as these processes cannot longer progress on their own. Therefore, I personally disagree with the inclusion of the words “conclusions”, “explanations”, “descriptions”, “inferences”, “interpretations”, etc., since each one of these words merely describe the components and functioning of mental processes and must be,

accordingly, kept from the definition of the word “research”. Furthermore, mental deductive processes are carried out only when all information, both researched and known information, is already obtained and therefore those words only acquire direction and purpose when all research processes reach an end. The conduction of such processes is determined by what is called a ‘research question’. ‘Research questions’ are exactly the same in skeleton as the type of questions described in the para. 31, and they extend themselves as widely as the 'hollow' that remains when all 'unknown' data is got rid of the way, thus we can judge a “good research question” in terms of: “How much relevant information is possible to cover, or collect, by asking such a question?”, and “How well do such a question help us in understanding the ultimate nature of a problem?

74) [Third & Fourth Phase] Processing & Analysis: Sometimes the processing phase stands for a synonym for the analysis phase, other times it precedes the analysis phase; for simplicity reasons I will take up the first occasion. It provides to its successor with an aid by converting and filtering the obtained information. In other words, it represents the action of separating the useful data from the useless data, the accurate data from the inaccurate data, and so on. Put more specifically, all collected information undergoes the following steps: (1) Collation: Data of an equal nature is grouped together to provide a basic record. (2) Evaluation: Evaluate the individual credibility and reliability of each group of information. Do not discard unreliable information but rather assign a level of confidence to it and keep it in mind. (3) Analysis: It means to sketch the causal relation between each category of information and their original chronological order. (4) Integration: It happens simultaneously with analysis: analysed information belonging to a category is combined with the information from another category which creates a path of reasoning, a general sequence of the events. (5) Interpretation: The purpose of this step is to make actionable interpretations on the ground of how significant the integrated information is, and how it relates to what is already known.

75) The first section of the present document may be considered as an extended explanation of the analysis [fourth] phase.

76) The post-processing involves: (1) Review and verify the result in order to eliminate false information. (2) Analyze in order to determine patterns, trends, connections, or similar. (3) Structure the result in such a way that it happens to be easy to act upon.

77) [Fifth Phase] Production: The analysis resulting from the previous phase is converted into intelligence products, such as: reports, assessments, and briefings. Types of periods include: (1) Daily Reports. (2) Weekly Reports, and (3) Monthly Reports. A report includes facts, chronology, conclusions and final questions. There are two types of reports: (1) briefings: It represents written information that is used to inform about an ongoing method, maneuver, or operation. It also admits a summary of the subject being analysed heretofore. Within its characteristics we found the usage of a counter for paragraph division and the resulting report as a whole is rather divided into sections covering a specific aspect on the subject. (2) Debriefings: are those reports whose content consists of lessons, resolutions, areas of improvement identified in accordance to the performance shown in a certain operation. It represents a post-analysis in its most detailed form. Actually, there are other four types of reports but, because of their applications, they have no use within this text. Just their names are to be mentioned for completeness reasons: (1) Maritime Reporting System (MRS). (2) Maritime Force Locator (MFL). (3) RECCEXREP, and (4) MISREP.

78) The production phase depends on the qualities of the messenger so that the products submitted can be seized upon efficiently. Among such qualities the following are found: (1) accuracy: all products shall be grounded on reliable and accurate sources. (2) Clarity: all products shall be written in such a way that they can be easily read and understood by any reader. Complexity shall be kept in the levels of the necessary, avoiding unnecessary complexity. (3) Timeliness: all products shall be submitted so that they ensure a timely reception and application for any decision-maker. (4) Standardisation: all products shall meet formats and guidelines already conveyed, ensuring consistency and ease of analysis.

79) [Sixth Phase] Dissemination: The intelligence product is submitted to all parties

concerned. This must be done in such a way that it results appropriately and readily applicable for the intended user, highlighting, if necessary, our interpretations, comments or recommendations. Timeliness and safety in handling the products over is also an essential aspect in dissemination. The dissemination phase is structured on its bones by two models: (1) push model: the intelligence community initiates the flow of information and the recipient receives it, and (2) Pull model: the recipient requests the flow and the intelligence community provides it. Notice that the push model is the one utilised in the US intelligence cycle.

80) There are three patterns in dissemination: (1) requirements-driven: the intelligence is disseminated in response to the necessities of decision-makers, offices, or military commanders. (2) Priority-based: The intelligence is disseminated according to its relevance and urgency, therefore more sensitive information requires a more cautious, careful dissemination. We can readily tell how sensitive a certain information is by identifying how cautious, secret, is its dissemination: we can tell so regardless of the content therein. (3) Need-to-Know: A recipient, whoever it might be, is only furnished with the information he needs to accomplish his task properly. Any overflow must be avoided since it compromises both ends' participation.

81) There are, generally speaking, three types of ways for disseminating communications: (1) Written Reports: They are useful when communicating large amounts of information. This method consists of intelligence reports, as seen in the previous phase; they are classificated judging from their sensitivity and communicated to authorised recipients (2) Oral Briefings: They are used when it is necessary to conduct a speech of short summaries to keep the situation uptodate. Secrecy and Discretion is required for such dissemination. (3) Secure Communication Networks: This method is conformed by private communication channels wherein information, often of an extra sensitive nature, is communicated rapidly and simultaneously to all agents or decision-makers concerned. It is useful when it is intended to transmit information collected in a short period of time (days, hours). This type may include video records or audio files.

CHAPTER IV.

Military Planning

Sections X. XI. XII.

SECTION X.

Main definition and description of military concepts. The what and the which when planning.

82) Objective: It is the final purpose/goal of any action. There are two types of objectives: (1) General Objectives: These are the bigger steps that hold the whole chain together. It would become an onerous experience if these steps are not accomplished first. (2) Specific Objectives: Also called ad hoc objectives, these are those objectives that show up as the bigger chain is progressing on. Accordingly, these may respond to new difficulties, requirements for methods in progress, and similar.

83) Mission: It is a collection of objectives that comprise a single step in the bigger chain. A mission can also be defined as the codename that is assigned to each objective of either nature. These codenames are communicated to every operative involved so that they can maneuver freely and promptly as soon as required.

84) Requirements: It is the information needed to accomplish any of the objectives skillfully and without incurring risks. Such information, most of the time, exists as a reply to gaps found in a previous collection. Requirements are based, to a great extent, in the integrity and accuracy of a collection, however collecting information should not be spotted as an aimless and vast deal of information incoming from “all kinds of sources”, but rather as tailor-made processes that strictly satisfy objectives already established. An aimless approach leads to intelligence failures; if the analyst gathers too much data, eventually he will find himself in a position where he has no capability to act upon the collected data and all efforts would be lost. Information requirements should always be kept in a bee's knees degree of detail; if, for instance, the analyst needs to snoop on some foggy birds, he will need to find out how many they are, who they are, how do they communicate, which methods do they use, routes, codenames, habits, dining preferences, residence addresses, and so on. No bee's knees should be discarded until the processing and production phases tell which information is relevant and which is not.

85) There are, broadly speaking, two types of information: (1) Order of Planning Information: Are included therein: (a) Information Requirements, and: (b) Subject Observations. (a) Is merely the collection of information that satisfies an objective's sine qua non. (b) Is the observation and tailor-made exploitation of a subject, which may be a person, a group, the logistics of a building, or of a facility.

86) (2) Order of Battle Information: This type of information corresponds to the so-called priority intelligence requirements. Are included therein the following categories:

1. Composition: The identification and organization of enemy units.
2. 2. Disposition: The location of enemy units by grid (or by military maps) and the manner in which these units are tactically deployed. Disposition also includes recent, current and projected enemy movements.
3. Strength: The specific number of personnel, weapons and equipment that an enemy unit has.
4. Tactics: Includes enemy tactical doctrine as well as tactics employed by specific units. Whereas tactical doctrine refers to the enemy’s accepted principles of organization and employment of forces when conducting an operation, the tactics alone describe the manner in which the enemy conducts an operation.
5. Training: Individual and unit training which contributes to the enemy unit’s combat effectiveness.
6. Logistics: Whereby an evaluation of the enemy’s capabilities can be made. Types of logistical information include:

    a) All classes and types of supplies
    b) Lines of communication
    c) Supplies requirements
    d) Procurement, distribution, maintenance, and transportation of supplies
    e) Terminals, installations and logistical points of control
    f) Evaluation and salvage of supplies

7. Electronic Technical Data: Include enemy communications and non-communications parameters.

8. Bee's Knees Information: Includes personality files, history, uniform and insignia, new weapons and equipment, call signs, and so on.

SECTION XI.

Means, methods and strategies: the how and the when.

87) Means: maneuvers, stratagems, strategies, tactics, operations, sabotage schemes: all of these are the methods through which the objectives are secured.Means should always be carried out according to the plan; any method that derails from the plan must be absolutely avoided. All means employ the information gathered up to the maximum of its availability. Means change as the general objectives progress which imply constant updating and furnishing of information but, again, all the information is let pass through inasmuch is required. For a sheer understanding on this matter, each element is provided with a definition: Maneuver: Maneuvers, within a military context, are strategic movements conducted in order to achieve an advantage during a combat. Troops, equipment and resources are required to be coordinated in order to secure mission objectives.

88) The state of maneuvering during combat situations is called “maneuver warfare”, it emphasizes three factors so that an advantage can be achieved: (1) movement promptness. (2) Initiative, and (3) Surprise factor. Losses procured to be provoked on the enemy side are always reached from an indirect view, avoiding, as much as possible, direct combat. Maneuver warfare seeks to apply strength against weakness by a six-composed means: (1) envelopment. (2) Encirclement. (3) Disruption. (4) Preemption. (5) Deception, and (6) Dislocation.

89) “Maneuver warfare” is essentially the set of strategies by which the enemy is kept away from using their strengths while their weaknesses are being exploited. The term “tactical maneuver” is used to refer to “gaining an advantageous position in relation to the enemy”; therefore, “tactical maneuver” and “maneuver warfare” mean different things. Moreover, according to Clausewitz, it constitutes an error to study an enemy's weaknesses without, in return, considering one's own capability to exploit them.

90) The Israeli military historian and theorist Martin van Creveld identifies six main factors in “maneuver warfare”: (1) Tempo: agility and promptness while striking. (2) Schwerpunkt: The

action of striking an enemy in the right place and at the right time. (3) Surprise: Leaving an enemy unable to counter-attack. It is better accomplished by striking in such a way that the enemy remains unaware that they have been attacked. The longer the enemy remains unaware, the better. (4) Combined Arms: Striking an enemy in such a manner that if the enemy counter-attacks in a way would leave them exposed in another. (5) Flexibility: It is striking an enemy in an unpredictable yet organized manner so that they cannot possibly predict how the next attack will be, and (6) Decentralised Command: A centralized command is prone to be surpassed by an environment that changes swiftly. Accordingly, lower ranks must be informed of the status quo so that they can adapt rapidly to new situations.

91) Operations: Operations are actions carried out by allied parties with the purpose of resolving a developing situation in their favour. There are, broadly speaking, five types of military operations: (1) Theater: This describes an operation over a large, often continental, area of operation and implies national commitment to the "conflict". (2) Campaign: This describes either a subset of a theater operation, or an operation more limited geographically with strategic commitment. These operations do not imply either national commitment, or longer-range objectives outside a military nature. (3) Battle: It describes a subset of a campaign operation which develops inside a specific geographic target and is conducted to secure specific objectives. (4) Engagement: It describes a tactical combat conducted for a specific geographic area and it implies the engagement of distinct parties, and (5) Strike: It describes a single, punctual attack conducted upon a specific target.A strike is usually included as part of an engagement and their objectives are tailor-made.

92) Stratagems: The word "stratagem" has two meanings: (1) A plan, scheme, or an artifice by which it is intended to deceive an enemy. The second definition stands merely for a synonym of the word maneuver. Under the first meaning, there are 36 stratagems distributed through six military contexts:

I WINNING STRATAGEMS.

1. Deceive the Heavens to cross the Sea: Mask your real objectives from those in

authority who lack vision to keep a track of your movements.

2. Besiege Wèi to Rescue Zhào: When the enemy is too strong to be attacked directly, attack something they cherish first. Parry their strengths while attacking their weaknesses.

3. Kill with a Borrowed Knife: Attack using other's strength when using yours is not favorable.

4. Wait at Leisure while the Enemy Labors: It is advantageous to choose the time and place of a battle whenever the enemy cannot. Encourage the enemy to waste their strengths in small targets while you are conserving your own strength. When the enemy is left tired and confused then attack vigorously.

5. Loot a Burning House: When an enemy is beset by internal problems, their strengths are as strong as your weaknesses. When the enemy is found in absolute weakness, attack them mercilessly and rapidly.

6. Make a Sound in the East then Strike in the West: Maintain the surprise factor pounding and ablaze even when in face-to-face encounters. Manipulate, feint, and deceive your enemy to strike him where he least expects it.

II ENEMY DEALING STRATAGEMS.

7. Create Something from Nothing: Make your enemy think that there was nothing when there was actually something, or vice versa.

8. Openly Repair the Gallery Roads, but Sneak through the Passage of Chencang: Make it look like you are approaching an enemy in an overtly manner, while attacking them covertly from another approach.

9. Watch the Fires Burning across the River: Delay your entrance at the battlefield until all other parties become exhausted and weakened from fighting each other, then attack them all in your full strength.

10. Hide a Knife behind a Smile: Sympathize with the enemy's confidence, when you have reached their heart's confidence, attack them powerfully.

11. Sacrifice the Plum Tree to preserve the Peach Tree: Whenever it turns necessary, sacrifice your own short-term objectives so that the long-term objective prevails.

12. Take the Opportunity to Pilfer a Goat: While carrying out a plan, take up any little advantage, however small, while on the way whenever the opportunity arises.

III OFFENSIVE STRATAGEMS.

13. Stomp the Grass to Scare the Snake: Do something unaimed but spectacular in appearance in order to provoke response from the enemy, so that you can either keep a hint of their intentions or ward them off from your plans.

14. Borrow a Corpse to Resurrect the Soul: Take up any means, philosophy, ideology, or method, to appropriate and avail your own purpose.

15. Lure the Tiger down the Mountain: Never attack an enemy whose power and strength is tightly bound to their position: lure them down to a weaker position and attack them then.

16. In order to Capture, One must Let Loose: A dual meaning is derived from this stratagem; the first corresponds to the stratagem III5, and the other one: Do not let an enemy get completely cornered: always make them believe that there is a chance to escape. Create this illusion strongly enough in their minds, then reveal before them the existence of the illusion; their vigorous spirits will turn into nothingness.

17. Tossing out a Brick to Lure a Gem: Make the enemy believe that they have gained, or that they have taken something valuable from you so that you actually get something more important in return.

18. Defeat the Enemy by Capturing the Chief: If an enemy's weakness relies on

their leader then attack the leader: make its entire image vanish from the enemy's mind and they will yield and disperse anywhere.

IV MIXED WARFARE STRATAGEMS.

19. Remove the Firewood from under the Pot: Take out or destroy all resources an enemy has to wage their strength in a war, in other words: do not attack an enemy’s forces but rather their supplies and their resources to maintain war.

20. Disturb the Water to Catch a Fish: Create confusion and bewilderment amidst an enemy's environment so that you can extract an advantage from it.

21. Slough off the Cicada's Golden Shell: Leave distinctive traces belonging to something else in order to become inconspicuous yourself and pass unnoticed.

22. Shut the Door to Catch the Thief: Capture, broadly speaking, your enemy by keeping them away from any escape routes or external aid.

23. Befriend a Distant State and Attack a Neighbouring One: Distant enemies are hard to strike since your own position is lower than theirs, hence close enemies are easier to attack. Another party far away can ally your enemy and attack you jointly, hence it is wise to take that advantage first.

24. Obtain Safe Passage to Conquer the State of Guo: Borrow an ally's resources to defeat an enemy together, afterwards use those resources to turn on the ally that lent them.

V COMBINED STRATAGEMS.

25. Replace the Beams with Rotten Timbers: Disrupt, interfere and worsen an enemy's methods or ideologies.

26. Point at the Mulberry Tree while Cursing the Locust Tree: To discipline or warn others whose position excludes them from direct confrontation: name their faults

but not their names, use analogies. They will expose themselves if they talk back or retaliate.

27. Feign Madness but Keep Your Balance: Pretend to be stupid to reveal their intentions, pretend to be weak to reveal their strengths, and pretend to be incompetent to reveal their methods.

28. Remove the Ladder when the Enemy has Ascended to the Roof: Once you have lured your enemy to a dangerous and treacherous terrain, cut all escape routes off from them.

29. Decorate the Tree with False Blossoms: By using artifices, disguise something valuable as worthless and vice versa.

30. Make the Host and the Guest exchange Roles: Usurp leadership from your enemy and make them the subordinates in return. Develop yourself from their very heart and then dominate them.

VI DEFEAT STRATAGEMS.

31. The Beauty Trap: Implant deceits amidst enemy territory by availing their beauty, distracting their minds from their objectives and making them weaker.

32. The Empty Fort: When your enemy is set up to strike and overrun you, act calmly and taunt them badly so that they think that they are actually heading to an ambush, warding off their strengths and making up a “better plan” to attack you.

33. Let the Enemy's own Spy Sow Discord in the Enemy Camp: Cause discord among an enemy's environment so that their capacity to counter-attack is reduced and slowed by the befuddlement sow among them.

34. Inflict Injury on oneself to Win the Enemy's Trust: This stratagem has two purposes: (1) to fool your enemy into thinking you are not a threat, and, (2) to fool your enemy into thinking that both of you share and chase the same purpose.

35. Chain Stratagems: Employ different stratagems simultaneously, or change your plan immediately when a stratagem has shown unsuccessful.

36. If All else Fails, Retreat: A retreat is, broadly speaking, a four-phase stage: being defeated, retreat, regroup, and counter-attack. A valuable retreat that works always ensures a stronger and cleverer strike than the previous one, not to mention that an escape is also a way for striking.

93) Strategies & Tactics: All strategies and tactics derive from the original three-steps process. Strategies correspond to the objectives and the what, while tactics correspond to the how and the when. Strategies are composed of three characteristics: (1) the planning and conduction of attacks. (2) The disposition of forces, and (3) The deception of the enemy. To plan a certain strategy involves choosing which stratagem to employ and they always are prior to tactics: when a strategy has been chosen, the tactics will specify how to carry out the attack, the proper way to do it and the timing of forces when attacking.

94) There are two main ideologies on the strategic warfare called ‘classical military strategies’: (1) Clausewitzian Strategy: its skeleton is comprised of 10 bones: (a) Trinity: (i) primordial violence: represents the inherent, natural brutality and chaos of any war, (ii) chance and probability: represents the inherent unpredictability and uncertainty of any war, and (iii) subordination: the necessity of military engagement for political objectives. (b) Purpose and means: represents the importance of balancing objectives and the means employed to accomplish them. (c) Friction: it refers to the inherent difficulties, drawbacks, troubles, and uncertainties of war, present in communications and troops/units. (d) Limited Objectives: it refers to the fact that an absolute victory can never be accomplished, so that all objectives must meet a precise, timely and unique purpose which may extend far ahead but not that much as to result in greediness. The inverse of such impossibility also holds: an absolute defeat can never be suffered. (e) The Center of Gravity: it represents a synonym of Cleveld's second main

factor in maneuver warfare, that is: Schwerpunkt. (f) Continuation of Politics: it can be summarised in one quote: “war is the continuation of politics by other means”. (g) The Importance of Context: the importance of the political, social, and cultural context of all parties concerned on a war. All strategies must be tailored to the specific circumstances of each party. (h) The Role of Intelligence: represents the importance not only of the collection but also the proper processing and analysis of information concerned to a war. Such performance, when done properly, proves itself of a great importance when it comes to decision-making. (i) The Interplay of Quantities and Qualities: quantitative factors are: strength, forces, resources, supplies, etc. Qualitative factors are: morale, leadership, tactics, (cap)abilities, training, etc. (j) The Pedagogy of Strategy: according to Mr. Clausewitz, strategy should be taught as a way of thinking rather than as a mere set of recipes. Critical thinking and problem-solving skills have also a key role in that ‘way’.

95) (2) Sun Tzu's Strategy: this strategy is based on three key principles: (i) Deception. (ii) Adaptability, and (iii) Speed, and its skeleton, just like the previous one, is comprised of 10 bones quite simple and straightforward: (a) Know yourself and know your enemy. (b) Flexibility & adaptability. (c) Avoid strengths, attack weaknesses. (d) Use Deception: deceive your enemy's eyes in order to deceive his mind. (e) Choose the Right Terrain: select, whenever possible, a terrain that enables you in exploiting the enemy's weaknesses. (f) Avoid direct confrontation. (g) Maintain a strong defensive position: ensure a secure base of operations (BOO for short) and take care of your forces and resources. (h) Use intelligence and espionage. (i) Maintain a unified command: this unification also implies a well-communicated and well-coordinated command among forces. (j) Be prepared to change your plan at any time.

SECTION XII.

The content, and properties of a plan. The process of planning.

96) Plan: what is called a plan is, essentially, a three-step process carried out in estimative terms. A plan is obtained by arranging the means throughout time in chronological order. Certain plans may often be developed backwards in relation to the original three-steps process: usually these plans have an objective already established by nature or by happening. A plan should provide an answer to the following questions and similar: Which of the means should be procured first? What order does it take to secure all the objectives? Which measures should be taken in order to reduce even the smallest risk? Is the chosen plan the one that involves the smallest risk?

97) When the relationship between the objectives and the means has been established, all methods acquire a widely changeable appearance. It is necessary to choose the clearer options and provide them with a plan. Moreover, each objective involves an underlying plan.

98) Types of Plans: There are two types of plans, namely: (1) General Plan: General plans are like the bigger pieces of a jigsaw: they provide a gleam on how the big idea would look like. All empty spaces in between can be filled in a variety of ways, and every piece we get rid of should be substituted with another piece shaped differently but whose value and objectives are the same. (2) Contingency Plan: It is the plan ready to be used in case that another plan fails. All general plans should be accompanied by, at least, one contingency plan. We might also name them: secondary plans, alternative plans, or emergency plans. For instance, for a plan A we may develop, assuming that it is necessary, four contingency plans: A1, A2, A3, and A4, having therefore five plans in all to back up the accomplishment of a single objective. Each 'contingency plan' is like a reasoning chain constructed on the basis of consequences (advantages and disadvantages), opportunities, and risks.

99) Types Of Planning Situations: There are two types of such situations which happen fitfully: (1) Cold Planning: When it is being planned an

anticipation for a contingency which might arise, for a risk, a danger, as a preparation for an event, etc. (2) Hot Planning: When planning a method that is imminent or in progress. Also called ad hoc planning or crisis planning. Hot Planning may involve planning for an unforeseen method or adapting an existing cold plan to changed circumstances. For most cases, hot planning is confined to revising, sometimes extensively, an existing contingency plan rather than producing a plan from scratch to meet a previously unforeseen contingency.

100) Planning Process: The planning process is schemed in three distinct stages: (1) Preliminary Scheme: Plan's outline at first-sighting. It is based on the information disposed of currently and prospective risks. (2) Draft: Plan's modifications in sight of upcoming data, appraisal and revision, and (3) Final Scheme: Definite version of the plan. Any planning process must enable three key features: (1) The production of flexible and realistic plans to meet foreseeable contingencies. (2) The rapid revision of plans, if required, when they have to be implemented, and (3) The up-dating of plans, either on a periodic basis or in response to specific changes.

101) A Plan's Content: The content in a plan can be divided into two types: (1) Main Contents:

1. Assumptions
2. Forces involved
3. Mounting responsibilities
4. Allocation of movement resources
5. The movement plans and timing
6. Possible tasks
7. Intelligence
8. Communications
9. Administration
10. Logistics
11. Any other collaboration

102) (2) Supporting Annexures: These show in a bee's knees-like manner the organization and administration that are necessary to give effect to the plan.